S))Q

YES NO N/A

PACKAGE COMPLETENESS AND DELIVERABLES

CASE NUMBER:_____ LAB:_____

SITE:_____

1.0 Data Completeness and Deliverables

1.1 Has all the data been submitted in CLP deliverable format? [ ] ___ ___

1.2 Have any missing deliverables been received and added to the data package? [ ] ___ ___

ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the data in the reviewer narrative.

2.0 Cover Letter, SDG Narrative

2.1 Is a laboratory narrative or cover letter present? [ ] ___ ___

2.2 Are the case number and/or SDG number contained in the narrative or cover letter? [ ] ___ ___

3.0 Data Validation Checklist

3.1 Does this data package contain:

Water data? ___ ___

Waste data? ___ ___

Soil/solid data? ___ ___

S))Q
YES NO N/A

YES NO N/A

ORGANOCHLORINE PESTICIDE/PCB ANALYSIS

1.0 Traffic Reports and Laboratory Narrative

1.1 Are traffic report and chain-of-custody forms present for all samples? [ ] ___ ___

ACTION: If no, contact lab for replacement of missing or illegible copies.

1.2 Do the traffic reports, chain-of-custody forms or SDG narrative indicate any problems with sample receipt, condition of the samples, analytical problems or special circumstances affecting the quality of the data? ___ [ ] ___

ACTION: If any sample analyzed as a soil, other than than TCLP, contains 50%-90% water, all data should be qualified as estimated, "J." If a soil sample, other than TCLP, contains more than 90% water, all data should be qualified as unusable, "R."

ACTION: If samples were not iced or if the ice was melted upon arrival at the laboratory and the temperature of the cooler was elevated (> 10E C), flag all positive results "J" and all non-detects "UJ".

2.0 Holding Times

2.1 Have any organochlorine pesticide/PCB technical holding times, determined from date of collection to date of extraction, been exceeded? ___ [ ] ___

Water and waste samples for organochlorine pesticide/PCB analysis must be extracted within 7 days of the date of collection. Extracts must be analyzed within 40 days of the date of extraction. Soils and solid samples must be extracted within 14 days of collection and analyzed within 40 days of extraction.

YES NO N/A

S))Q
YES NO N/A

ACTION: If technical holding times are exceeded, flag all positive results as estimated, "J," and sample quantitation limits "UJ" and document in the narrative that holding times were exceeded. If analyses were done more than 14 days beyond holding time, either on the first analysis or upon reanalysis, the reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all the data should at least be qualified "J", but the reviewer may determine that non-detects are unusable,"R."

3.0 Surrogate Recovery (Form II)

3.1 Were the recoveries of tetrachloro-m-xylene (TCMX) and decachlorobiphenyl (DCB) presented on CLP Surrogate Recovery Summary forms (Form II), or equivalent, for each of the following matrices?

a. Water/Waste [ ] ___ ___

b. Soil/Solid [ ] ___ ___

3.2 Are all the pesticide/PCB samples listed on the appropriate surrogate recovery form for each of the following matrices?

a. Water [ ] ___ ___

b. Waste [ ] ___ ___

c. Soil/Solid [ ] ___ ___

ACTION: Call lab for explanation/resubmittals. If missing deliverables are unavailable, document the effect in the data assessment.

3.3 Have laboratory-established surrogate control

	YES	NO	N/A
limits been calculated properly using the procedure outlined in section 8.10, pages 8000A-13 & 14?	[ ]	___	___

S))Q

YES NO N/A

NOTE: Surrogate control limits should be calculated using percent recoveries and standard deviation results obtained from 25 to 30 samples for each matrix.

ACTION: If evidence suggests that the surrogate control limits were calculated improperly, contact the laboratory for explanation. Make note of the problem in the data assessment and qualify data based on 60-150% recovery in section 3.4 below.

3.4 Were surrogate recoveries of TCMX or DCB outside of the laboratory-established upper (UCL) or lower (LCL) control limits for any sample or blank? [ ] ___

ACTION: Circle all outliers in red.

ACTION: No qualification is done if surrogates are diluted out. If recovery for <u>both</u> surrogates is below the LCL, but above 10%, flag all results for that sample "J". If recovery is < 10% for either surrogate, qualify positive results "J" and flag non-detects "R". If recovery is above the UCL for <u>both</u> surrogates qualify positive values "J".

3.5 Were surrogate retention times (RT) within the windows established during the initial 5-point analysis? [ ] ___ ___

ACTION: If the RT limits are not met, the analysis may be qualified unusable (R) for that sample on the basis of professional judgement. However, flag positive hits as estimate (J) if confirmed by GC/MS analysis.

3.6 Are there any transcription/calculation errors between raw data and Form II? ___ [ ] ___

ACTION: If large errors exist, call lab for explanation/resubmittal. Make any necessary

corrections and document the effect in data assessments.

S))Q
YES NO N/A

4.0 QC Check Sample

4.1 Are raw data and percent recoveries present for all four QC check samples as required by Method 8000A (section 8.6)? [ ] ___ ___

Verify that QC check samples were extracted and analyzed by the same procedures used for the actual samples.

ACTION: If any data are missing or if less than four QC check samples were extracted and analyzed, call the lab for explanation/resubmittals. Make note in the data assessment.

NOTE: For aqueous samples, an additional QC check sample must be prepared and analyzed when any analyte in a matrix spike fails the required acceptance criteria (see section 5.3 below). The additional QC check sample must contain each analyte that failed in the MS analysis.

4.2 Were QC check samples analyzed at the required concentration for all analytes of interest as specified in Method 8000A? [ ] ___ ___

When 1 ml of the QC check sample concentrate is added to each of four 1-R aliquots of water, the resulting samples should contain all single component analytes at the following concentrations: 4,4'-DDD, 4,4'-DDT, endosulfan II, endosulfan sulfate and endrin at 10 Fg/l; aldrin, "-BHC, $-BHC, *-BHC, (-BHC, 4,4'-DDE, dieldrin, endosulfan I, endrin aldehyde, heptachlor, heptachlor epoxide, 4,4'-methoxychlor at 2 Fg/R. If this method is only to be used to analyzed for PCBs, chlordane, or toxaphene, the QC sample concentrate should contain the most representative multi-component parameter at a concentration of 50 mg/R in acetone.

ACTION: If QC check samples were not analyzed at the

S))Q

YES NO N/A

required concentration or the required frequency, make note in the data assessment and use professional judgement to determined the affect on the data.

4.3 Do standard deviation (s) and average recovery $\bar{x}$ (x in Fg/l) for each analyte meet the corresponding QC acceptance criteria listed in Table 3, page 8080A-17? [ ] ___ ___

4.4 If no, were QC check samples reanalyzed? [ ] ___ ___

When one or more of the analytes of interest fail at least one of the QC acceptance criteria in Table 3, the laboratory must either:

1) Locate and correct the source of the problem; reextract and reanalyze 4 new QC check samples containing all analytes of interest.

2) Reextract and reanalyze 4 QC check samples containing only those analytes which failed the initial test.

ACTION: If QC check samples were not reanalyzed, or a general system problem is indicated by repeated failure to meet the QC acceptance criteria specified in the method, make note in the data assessment and use professional judgement to determine the effect on the data.

5.0 Matrix Spikes (Form III)

5.1 Is all data for matrix spike and matrix duplicate or matrix spike duplicate (MS/MD or MS/MSD) present and complete for each matrix? [ ] ___ ___

NOTE: For soil and waste samples showing detectable amounts of organics, the lab may substitute

	YES	NO	N/A
replicate samples in place of the matrix spike (see page 8000A-11, section 8.7).			
5.2 Have MS/MD or MS/MSD results been summarized on modified CLP Form III?	[ ]	___	___

ACTION: If any data are missing take action as specified in section 3.2 above.

S))Q

YES NO N/A

5.3 Were matrix spikes analyzed at the required frequency for each of the following matrices? (One MS/MD, MS/MSD or laboratory replicate must be performed for every 20 samples of similar matrix or concentration level. Laboratories analyzing one to ten samples per month are required to analyze at least one MS per month [page 8000A-11, section 8.7.])

a. Water [ ] ___ ___

b. Waste [ ] ___ ___

c. Soil/Solid [ ] ___ ___

ACTION: If any MS/MD, MS/MSD or replicate data are missing, take the action specified in 3.2 above.

5.4 Was the criteria in Table 3, page 8080A-17 used to compare the matrix spike recoveries, or did the lab use the optional QC acceptance criteria discussed in section 8.7.3, page 8000A-12?

List the criteria used and make note in data assessment.

Criteria used _____

5.5 How many single component spike recoveries exceeded the QC acceptance criteria applicable to these samples?

Waters	Wastes	Soils/Solids
____ out of ___*	____ out of ___*	____ out of ___*

* NOTE: The actual number of MS analytes depends on the number analytes being measured (e.g., total number of MS plus MSD compounds). If only

S))Q
YES NO N/A

PCBs, chlordane or toxaphene are analytes of interest, the spiked sample should contain the most representative multi-component analyte.

S))Q

YES NO N/A

5.6 Was the matrix spike prepared at the proper concentration? [ ] ___ ___

For aqueous organic extractibles, the spike concentration should be:

1) For regulatory compliance monitoring - the regulatory concentration limit or 1 to 5 times the expected background concentration, whichever is higher;

2) For all other aqueous samples - the larger of either 1 to 5 x times the expected background concentration, or the same as the QC check sample concentration (see section 4 above);

3) For soil/solid and waste samples - the recommended concentration is 20 times the estimated quantitation limit (EQL).

ACTION: No action is taken based on MS or replicate data alone. However, using informed professional judgement, the data reviewer may use the matrix spike or laboratory replicate results in conjunction with other QC criteria and determine the need for some qualification of the data. In some instances it may be determined that only the replicate or spiked samples are affected. Alternatively, the data may suggest that the laboratory is having a systematic problem with one or more analytes, thereby affecting all associated samples.

6.0 Blanks (Form IV)

6.1 Was reagent blank data reported on CLP Method Blank Summary form(s) (Form IV)? [ ] ___ ___

6.2 Frequency of Analysis: For the analysis of organochlorine pesticide/PCB compounds, has a reagent blank been analyzed for every 20 samples of similar matrix or concentration or each

	YES	NO	N/A
extraction batch, whichever is more frequent?	[ ]	___	___

S))Q

YES NO N/A

ACTION: If any blank data are missing, take action as specified above (section 3.2) . If blank data is not available, reject (R) all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

6.3 Chromatography: review the blank raw data - chromatograms, quant reports or data system printouts.

Is the chromatographic performance (baseline stability) for each instrument acceptable for pesticides/PCBs? [ ] ___ ___

ACTION: Use professional judgement to determine the effect on the data.

7.0 Contamination

NOTE: "Water blanks", "distilled water blanks" and "drilling water blanks" are validated like any other sample and are not used to qualify the data. Do not confuse them with the other QC blanks discussed below.

7.1 Do any method/instrument/reagent/cleanup blanks have positive results for organochlorine pesticides/PCBs? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample Dilution Factor and corrected for % moisture when necessary. ___ [ ] ___

7.2 Do any field/rinse blanks have positive organochlorine pesticide/PCB results? ___ [ ] ___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated to a particular group of samples (may exceed one per

case or one per day) may be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate, or calibration QC problems.

ACTION: Follow the directions in the table below to qualify sample results due to contamination. Use the largest value from all the associated blanks.

Sample conc > EDL but < 5 x blank	Sample conc < EDL & is < 5 x blank value	Sample conc > EDL & > 5 x blank value
Flag sample result with a "U"	Report EDL & qualify "U"	No qualification is needed

NOTE: If gross blank contamination exists, all data in the associated samples should be qualified as unusable (R).

7.3 Are there field/rinse/equipment blanks associated with every sample? [ ] ___ ___

ACTION: For low level samples, note in data assessment that there is no associated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.

8.0 GC Apparatus and Materials

8.1 Was the proper gas chromatographic column used for the analysis of organochlorine pesticides/PCBs? Check raw data, instrument logs, or contact the lab to determine what type of columns were used. [ ] ___ ___

Was column 1 constructed using the recommended

S))Q

	YES	NO	N/A
materials: Supelcoport (100/120 mesh), coated with 1.5% SP-2250/1.95% SP-2401, packed in a 1.8 m x 4 m ID glass column or equivalent?	[ ]	___	___
Was column 2 constructed using the recommended Supelcoport (100/120 mesh), coated with 3% OV-1 in a 1.8 m x 4 mm ID glass column or equivalent?	[ ]	___	___

S))Q

YES NO N/A

8.2 Did the laboratory use capillary columns instead for the analysis of:

pesticides? ___ ___

PCBs? ___ ___

8.3 If capillary columns were used, were they both wide bore (.53 mm ID) fused silica GC columns, such as DB-608 and DB-1701 or equivalent. Indicate the specific type of column used for:

column 1: _____

column 2: _____

ACTION: Note any changes to the suggested materials in section 8.1 above in the data assessment. Also note the impact (positive or negative) such changes have on the analytical results.

9.0 Calibration and GC Performance

9.1 Are the following Gas Chromatograms and Data Systems Printouts for both columns present for all samples, blanks, MS, replicates?

a. DDT/endrin breakdown check [ ] ___ ___

b. Aroclor 1016/1260 [ ] ___ ___

b. Aroclors 1221, 1232, 1242, 1248, 1254 [ ] ___ ___

c. toxaphene [ ] ___ ___

d. technical chlordane [ ] ___ ___

e. 5 pt. initial calibration standards [ ] ___ ___

f. calibration verification standards [ ] ___ ___

S))Q

	YES	NO	N/A
g. QC check standards (at least 4)	[ ]	___	___
h. reagent blanks	[ ]	___	___

ACTION: If no, take action specified in 3.2 above.

9.2 Has a DDT/endrin breakdown check standard (at the mid-concentration level) been analyzed at the beginning of each analytical sequence on both columns (page 8080A-7, section 7.4.5)?	[ ]	___	___

ACTION: If no, take action as specified in 3.2 above.

9.3 Has the individual % breakdown exceeded 20.0% on either column.	___	[ ]	___
- for 4,4' - DDT?	___	[ ]	___
- for endrin?	___	[ ]	___

ACTION: If any % breakdown has failed the QC criteria in the breakdown check standard, qualify all sample analyses in the entire analytical sequence as described below.

a. If 4,4'-DDT breakdown is greater than 20.%:

   i. Qualify all positive results for DDT with 'J". If DDT was not detected, but DDD and DDE are positive, then qualify the quantitation limit for DDT as unusable ("R").

   ii. Qualify positive results for DDD and DDE as presumptively present at an approximated quantity ("NJ").

b. If endrin breakdown is greater than 20.0%:

i. Qualify all positive results for endrin with "J". If endrin was not detected, but endrin aldehyde and endrin ketone are positive, then qualify the quantitation limit for endrin as unusable ("R").

ii. Qualify positive results for endrin ketone and endrin aldehyde as presumptively present at an approximated quantity ("NJ").

9.4 Are data summary forms (containing calibration factors or response factors) for the initial 5 pt. calibration and daily calibration verification standards present and complete for each column and each analytical sequence? [ ] ___ ___

NOTE: If internal standard calibration procedure is used (page 8000A-3, section 7.4.3), then response factors must be used for %RSD calculations and compound quantitation. If, external standard calibration procedures are used (page 8000A-2, section 7.4.2), then calibration factors must be used.

ACTION: If any data are missing or it cannot be determined how the laboratory calculated calibration factors or response factors, contact the lab for explanation/resubmittals. Make necessary corrections and note any problems in the data assessment.

9.5 Are there any transcription/calculation errors between raw data and data summary forms? ___ [ ] ___

ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and document the effect in data assessments.

S))Q

YES NO N/A

9.6 Are standard retention time (RT) windows for each analyte of interest presented on modified CLP summary forms? [ ] ___ ___

ACTION: If any data are missing, or it cannot be determined how RT windows were calculated, call the lab for explanation/resubmittals. Note any problems in the data assessment.

S))Q
YES NO N/A

NOTE: Retention time windows for all pesticides and PCBs are established using retention times from three calaibration standards analyzed during the entire analytical sequence (page 8000A-4, section 7.5).

A 72 hr. sequence is not required with this method (page 8080A-7, section 7.4.2); however, the method states that best results are obtained using retention times which span the entire sequence. I.E., using the mid level from the 5 pt., one of the mid-concentration standards analyzed during mid-sequence and one analyzed at the end.

9.7 Were RT windows on the confirmation column established using three standards as described above? [ ] ___ ___

NOTE: RT windows for the confirmation column should be established using a 3 pt. calibration, preferably spanning the entire analytical sequence as described in 9.6 above. If RT windows on one column are tighter than the other, this may result in false negatives when attempting to identify compounds in the samples.

ACTION: Note potential problems, if any, in the data assessment.

9.8 Do all standard retention times in each level of the initial 5 pt. calibrations (for both pesticides and Aroclors) fall within the windows established during the initial calibration sequence? [ ] ___ ___

ACTION: i. If no, all samples in the entire analytical sequence are potentially affected. Check to see if three standards, spanning the entire sequence were used to obtained RT windows. If the

YES NO N/A

lab used three standards from the 5 pt., RT windows may be too tight. If so, RT windows should be recalculated as per page 8000A-5, section 7.5.2.2.

S))Q

YES NO N/A

ii. Alternatively, check to see if the chromatograms contain peaks within an expanded window surrounding the expected retention times.

If no peaks are found and the surrogates are visible, non-detects are valid. If peaks are present but cannot be discerned through pattern recognition or by using revised RT windows, qualify all positive results and non-detects as unusable, "R".

ACTION: For aroclors, toxaphene and chlordane, the RT may be outside the RT window, but these analytes may still be identified from their individual patterns.

9.9 Has the linearity criteria for the initial calibration standards been satisfied for both columns? (% RSD must be < 20.0% for all analytes). [ ] ___ ___

ACTION: If no, qualify all associated positive results generated during the entire analytical sequence "J" and all non-detects "UJ". When RSD > 90%, flag all non-detect results for that analyte "R" (unusable).

9.10 Has a calibration verification standard containing all analytes of interest been analyzed on each working day, prior to sample analyses (pages 8000A-3, 4 & 6, sections 7.4.2.3, 7.4.3.4 & 7.6.8, respectively)? [ ] ___ ___

9.11 Has a mid-concentration standard also been analyzed after every 10 samples and at the end of each analytical sequence (page 8080A-6, section 7.4.2 & page 8000A-6, section 7.6.)? [ ] ___ ___

ACTION: If no, take action as specified in section 3.2 above.

S))Q

YES NO N/A

9.12 Has the percent difference (%D) exceeded ± 15% for any organochlorine pesticide/PCB analyte in any calibration verification standard or mid-concentration standard? ___ [ ] ___

9.13 Has a new 5 pt. calibration curve been generated for those analytes which failed in the calibration verification standard (page 8000A-3, section 7.4.2.3), and all samples which followed the out-of-control standard (page 8000A-6, section 7.6.8) reinjected? [ ] ___ ___

ACTION: If the %D for any analyte exceeded the ± 15% criterion and the instrument was not recalibrated for those analytes, qualify positive results for all associated samples (those which followed the out-of-control standard) "J" and sample quantitation limits "UJ". If the %D was > 90% for any analyte, qualify non-detects "R", unusable.

9.14 Have <u>daily</u> retention time windows been properly calculated for each analyte of interest (page 8000A-6, section 7.6.9.), using RTs from the associated mid concentration standard and standard deviation from the initial calibration)? [ ] ___ ___

ACTION: If no, take action specified in section 3.2 above or recalculate RT windows using the procedure outlined in method 8000A-5, section 7.5.2.2.

9.15 Do all standard retention times for each mid concentration standard fall within the windows established during the initial calibration sequence? [ ] ___ ___

S))Q

YES NO N/A

9.16 Do all standard retention times for each mid-concentration standard (analyzed after every 10 samples) fall within the daily RT windows (page 8000A-10, section 7.6.9.2? [ ] ___ ___

ACTION: If the answer to either 9.15 or 9.16 above is no, check the chromatograms of all samples which followed the last in-control standard. All samples analyzed after the last in-control standard must be re-injected, if initial analysis indicated the presence of the specific analyte that exceeded the retention time criteria (page 8000-6, section 7.6.8). If samples were not re-analyzed, document under Contract Non-compliance in the Data Assessment.

Reviewer have two options to determine how to qualify questionable sample data. First option is to determine if possible peaks are present within daily retention time window. If no possible peaks are found, non-detects are valid. If possible peaks are found (or interference), qualify positive hits as presumptively present "NJ" and non-detects are rejected "R". Second option is to use the ratio of the retention time of the analyte over the retention time of either surrogate. The passing criteria is ± 0.06 RRT units of the RRT of the standard component. Reject "R" all questionable analytes exceeding criteria, and "NJ" all other positive hits.

For PCB or any multi-reponse analytes, retention time windows should be used but analyst and reviewer should rely primarily on pattern recognition or use option 2 specified in paragraph above.

9.17 Are there any transcription/calculation errors between raw data and data summary forms? ___ [ ] ___

S))Q
YES NO N/A

ACTION: If large errors exists, call lab for explanation/resubmittal, make any necessary corrections and document the effect in data assessments under "Conclusions".

10.0 Analytical Sequence Check (Form VIII-PEST)

10.1 Have all samples been listed on CLP Form VIII or equivalent, and are separate forms present for each column? [ ] ___ ___

ACTION: If no, take action specified in 3.2 above.

10.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses (see pages 8080A-6 & 7, section 7.4)? [ ] ___ ___

ACTION: If no, use professional judgement to determine the severity of the effect on the data and qualify it accordingly. Generally, the effect is negligible unless the sequence was grossly altered or the calibration was also out of limits.

11.0 Cleanup Efficiency Verification (Form IX)

11.1 Is Form IX - Pest-1 present and complete for each lot of Florisil/Cartridges used? (Florisil Cleanup, Method 3620A, is required for all organochlorine pesticide/PCB extracts.) [ ] ___ ___

ACTION: If no, take action specified in 3.2 above. If data suggests that florisil cleanup was not performed, make note in the reviewer narrative.

NOTE: Method 3620A uses florisil, while the SOW/CLP allows for florisil cartridges. Method 3620A does not list which pesticides and surrogate(s)

S))Q

YES NO N/A

to use to verify column efficiency. The reviewer must check project plan to verify method used as well as the correct pesticide list. If not stated or available, use the CLP listing or accept what the laboratory used.

If only PCBs are to be measured in a sample, the sulfuric acid/permanganate cleanup method (Method 3665), followed by Silica Cleanup (Method 3630) or Florisil Cleanup (Method3620) is reccommended.

11.2 Are all samples listed on modified CLP Pesticide Florisil/Cartridge Check Form? [ ] ___ ___

ACTION: If no, take action specified in 3.2 above.

11.3 If GPC Cleanup was performed, is Form IX - Pest-2 present? [ ] ___ ___

ACTION: If GPC was not performed and sample results indicate significant sulfur interference, make note in the data assessment.

NOTE: GPC cleanup is not required and is optional. The reviwer should check Project Plan to verify requirement.

11.4 Were the same compounds on Form IX used to check the efficiency of the cleanup procedures? [ ] ___ ___

11.5 Are percent recoveries (% R) of the pesticide and surrogate compounds used to check the efficiency of the cleanup procedures within QC limits listed on Form IX:

80-120% for florisil cartridge check? [ ] ___ ___

80-110% for GPC calibration? [ ] ___ ___

Qualify only the analyte(s) which fail the recovery criteria as follows:

ACTION: If % R are < 80%, qualify positive results "J"

S))Q
YES NO N/A

and quantitation limits "UJ". Non-detects should be qualified "R" if zero %R was obtained for pesticide compounds. Use professional judgement to qualify positive results if recoveries are greater than the upper limit.

NOTE: If 2,4,5-trichlorophenol was used to measure the efficiency of the Florisil cleanup and the recovery was > 5%, sample data should be evaluated for potential interferences.

NOTE: An Aroclor standard should be used to verify the efficiency of the GPC column. The raw data of this GPC calibration check analysis should be evaluated for pattern similarity with previously run Aroclor standards.

12.0 Pesticide/PCB Identification

12.1 Has CLP Form X, showing **retention time** data for positive results on the two GC columns, been completed for every sample in which a pesticide or PCB was detected? [ ] ___ ___

ACTION: If no, take action specified in 3.2 above, or compile a list comparing the retention times for all sample hits on the two columns.

12.2 Are there any transcription/calculation errors between raw data and data summary forms (initial calibration summaries, calibration verification summaries, analytical sequence summaries, GPC and Florisil cleanup verification forms)? ___ [ ] ___

ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and note error in the data assessment.

S))Q

	YES	NO	N/A
12.3 Are retention times (RT) of sample compounds within the established RT windows for both analyses?	[ ]	___	___

ACTION: Qualify as unusable (R) all positive results which were not confirmed by second GC column analysis. Also qualify "R", unusable, all positive results not within RT windows unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

12.4 Check chromatograms for false negatives, especially if RT windows on each column were established differently (see section 9.7 above). Also check for false negatives among the multiple peak compounds toxaphene, chlordane and PCBs. Were there any false negatives?	___	[ ]	___

ACTION: Use professional judgement to decide if the compound should be reported. If there is reason to believe that peaks outside retention RT windows should be reported, make corrections to data summary forms (Form I) and note in data assessment.

12.5 Was GC/MS confirmation provided when sample concentration was sufficient (> 10 ug/ml) in the final extract?	[ ]	___	___

ACTION: Indicate with red pencil which Form I results were confirmed by GC/MS and also note in data assessment.

12.6 Is the percent difference (%D) calculated for the positive sample results on the two GC columns <25.0%?	[ ]	___	___

NOTE: The method 8080A requires quantitation from one column. The second column is to confirm the

presence of an analyte. Calibration for the Confirmation column is a one point calibration. It is the reviewer's responsibility to verify from the project plan what the lab was required to report. If the lab was required to report concentrations from both columns, continue with validation for % Difference. If required, but not reported, either contact the lab for results or calculate the concentrations from the calibration. If not required, skip this section. Document actions in Data Assessment.

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be qualified as follows:

% Difference	Qualifier
0-25%	none
25-70%	"J"
70-100%	"NJ"
>100%	"R"
100-200% (Interference detected)*	"NJ"
>50% (Pesticide vale is <CRQL)**	"U"

* When the reported %D is 100-200% but interference is detected in either column, qualifiy the data with "NJ".

** When the **reported** pesticide value is lower than the CRQL, and the %D is >50%, raise the value to the CRQL and qualifiy with "U" (non-detect).

13.0 Compound Quantitation and Reported Detection Limits

13.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Were any errors found? ___ [ ] ___

NOTE: Single-peak pesticide results can be checked for rough agreement between quantitative results obtained on the two GC columns. The

S))Q
YES NO N/A

reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interference is suspected, the lower of the two values should be reported and qualified according to section 12.6 above. This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

13.2 Are the EDLs (Estimated Detection Limits) adjusted to reflect sample dilutions and, for soils, % moisture? [ ] ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments.

ACTION: When a sample is analyzed at more than one dilution, the lowest EDLs are used (unless a QC exceedance dictates the use of the higher EDL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the value on the original Form I and substituting it with data from the analysis of diluted sample. Specify which Form I is to be used, then draw a red "X" across the entire page of all Form I's that should not be used, including any in the summary package.

ACTION: EDLs affected by large, off-scale peaks should be qualified as unusable, "R". If the interference is on-scale, the reviewer can provide a modified EDL flagged "UJ" for each affected compound.

S))Q

YES NO N/A

14.0 Chromatogram Quality

14.1 Were baselines stable? [ ] ___ ___

14.2 Were any electropositive displacement (negative peaks) or unusual peaks seen? ___ [ ] ___

ACTION: Note all system performance problems in the data assessment.

15.0 Field Duplicates

15.1 Were any field duplicates submitted for organochlorine pesticide/PCB analysis? [ ] ___ ___

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between field duplicate results must be addressed in the reviewer narrative. However, if large differences exist, the identity of the field duplicates is questionable. An attempt should be made to determine the proper identification of field duplicates.